

## PHYSICS 344 Modern Physics mini-project #1.

**Due Oct. 7 Monday midnight (11:59pm)** by uploading to coursewiki/project1

(<https://phys344modernphysics.wikispaces.com/Project+1>)

Choose one from the following, and upload your entry/file into the appropriate table in the Project 1 page under coursewiki (line above)

### **Project 1a: Milestones in the history of Modern Physics.**

The pre-text pages following the cover of our textbook have a list of important milestones in the history of physics. Pick one that is after (including) 1900 and make a 1 powerpoint slide "nugget" summarizing that work and its importance. To help you and people pick different milestones, follow this guideline: find the last 2 digits ("xy") of your Purdue ID number and choose the milestone whose year is closest to "19xy" (for example, if your last 2 digits are 43, you would pick "1942 Enrico Fermi and colleagues produce first synthetic transuranic elements"). Alternatively, you can also pick the Nobel physics prize awarded in the year "19xy" (found under [http://www.nobelprize.org/nobel\\_prizes/physics/laureates/](http://www.nobelprize.org/nobel_prizes/physics/laureates/) ---- for example, for 1943 it was Otto Stern "for his contribution to the development of the molecular ray method and his discovery of the magnetic moment of the proton")

### **Project 1b: Nobel prediction.**

Pick a notable achievement in physics that you believe should be awarded a Nobel prize, and write a 1-page nomination letter to explain why you think so (summarize the work and its importance, you may include 1 figure in your letter and some references). Obviously you should pick an achievement that has *not* already been awarded Nobel prize before (past prizes listed in [http://www.nobelprize.org/nobel\\_prizes/physics/laureates/](http://www.nobelprize.org/nobel_prizes/physics/laureates/)).

Some suggested places to look for important work in physics maybe:

- physics achievements that made into Science magazine's annual list of "breakthrough of the year" (see eg. 2012 list in <http://www.sciencemag.org/site/special/btoy2012/> and also previous years's list)
- Physics World's annual "top 10 physics stories of the year" (see eg. 2011 list in <http://physicsworld.com/cws/article/news/2011/dec/16/physics-world-reveals-its-top-10-breakthroughs-for-2011> as well as other years list)
- APS (American Physical Society) annual "top 10 physics news stories of the year" (see, eg. 2008 list in <http://www.aps.org/publications/apsnews/200902/physicsstories.cfm>, as well as other years' list, eg. found by google it)
- Go to [Web of Science](#) (or another similar publication/citation database) and enter a topic and find out which is the most cited (original work, not review) papers published on that topic